LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A finger/palm print image processing system comprising:

a frequency component analysis unit configured to perform a frequency analysis on each of plural small regions into which a finger/palm print image is divided, to obtain plural frequency components representing each of the plural small regions; and

a frequency component judgment unit configured to judge clarity of the small regions corresponding to the frequency components, based on the frequency components, wherein:

said finger/palm print image indicates at least one of a finger print and a palm print;

said frequency component analysis unit obtains a first analysis result of performing a frequency analysis on a center portion of the small region, and a second analysis result of performing a frequency analysis on the small region including peripheral portions; and

said frequency component judgment unit judges the small region to be a region having a fine structure if a difference exists between the first and second analysis results, or judges the small region to be a region having a monotonous flow if no difference exists between the first and second analysis results.

2. (Original) The finger/palm print image processing system according to claim 1, wherein:

said frequency component analysis unit uses a Fourier transform as the frequency analysis; and

said frequency component judgment unit judges clarity of the small region corresponding to the frequency components, based on the frequency components and a result of subjecting a clear two-dimensional sinusoidal wave to a Fourier transform.

3. (Currently amended) The finger/palm print image processing system according to claim 1 ~~or 2~~, wherein

said frequency component analysis unit decides one point in a frequency space as the frequency components based on a result of the frequency analysis, and approximates the small

- 4 -

region corresponding to the frequency components, to a representative point two-dimensional sinusoidal wave as a two-dimensional sinusoidal wave corresponding to the one point in the frequency space.

4. (Canceled)

5. (Canceled)

6. (Canceled)

7. (Canceled)

8. (Canceled)

9. (Currently amended) The finger/palm print image processing system according to ~~any one of claims 1 to 3~~ claim 1, further comprising

a ridgeline image extraction unit configured to change a method of extracting ridgelines from the finger/palm print image in the small region, based on the judgment result of clarity of the small region for each of the plural small regions, and to extract the ridgelines.

10. (Canceled)

11. (Canceled)

12. (Original) A finger/palm print image processing method comprising:

a step (a) of performing a frequency analysis on each of plural small regions into which a finger/palm print image is divided, to obtain plural frequency components representing each of the plural small regions, the finger/palm print image indicating at least one of a finger print and a palm print; and

a step (b) of judging clarity of the small regions corresponding to the frequency components, based on the frequency components, wherein:

- 5 -

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said step (a) includes a step (a4) of obtaining a first analysis result performing a frequency analysis on a center portion of the small region, and a second analysis result performing a frequency analysis on the small region including peripheral portions; and

said step (b) includes a step (b3) of judging the small region to be a region having a fine structure if a difference exists between the first and second analysis results, or judging the small region to be a region having a monotonous flow if no difference exists between the first and second analysis results.

13. (Original) The finger/palm print image processing method according to claim 12, wherein:

said step (a) includes a step (a1) of using a Fourier transform as the frequency analysis; and

said step (b) includes a step (b1) of judging clarity of the small region corresponding to the frequency components, based on the frequency components and a result of subjecting a clear two-dimensional sinusoidal wave to a Fourier transform.

14. (Currently amended) The finger/palm print image processing method according to claim 12 or 13, wherein

said step (a) includes:

a step (a2) of deciding one point in a frequency space as the frequency components, based on a result of the frequency analysis; and

a step (a3) of approximating the small region corresponding to the frequency components, to a representative point two-dimensional sinusoidal wave as a two-dimensional sinusoidal wave corresponding to the one point in the frequency space.

15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (Canceled)

19. (Canceled)

20. (Currently amended) The finger/palm print image processing method according to ~~any one of claims 12 to 14~~ claim 12, further comprising

a step (d) of changing, for each of the plural small regions, a method of extracting ridgelines from the finger/palm print image in the small region, based on the judgment result of clarity of the small region, and extracting the ridgelines.

21. (Canceled)

22. (Canceled)

23. (Original) A program for making a computer execute a method, comprising:

a step (a) of performing a frequency analysis on each of plural small regions into which a finger/palm print image is divided, to obtain plural frequency components representing each of the plural small regions, said finger/palm print image indicating at least one of a finger print and a palm print; and

a step (b) of judging clarity of the small regions corresponding to the frequency components, based on the frequency components, wherein:

said step (a) includes a step (a4) of obtaining a first analysis result performing a frequency analysis on a center portion of the small region, and a second analysis result performing a frequency analysis on the small region including peripheral portions; and

said step (b) includes a step (b3) of judging the small region to be a region having a fine structure if a difference exists between the first and second analysis results, or judging the small region to be a region having a monotonous flow if no difference exists between the first and second analysis results.

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24. (Original) The program according to claim 23, wherein:

said step (a) includes a step (a1) of using a Fourier transform as the frequency analysis; and

said step (b) includes a step (b1) of judging clarity of the small region corresponding to the frequency components, based on the frequency components and a result of subjecting a clear two-dimensional sinusoidal wave to a Fourier transform.

25. (Currently amended) The program according to claim 23 ~~or 24~~, wherein

said step (a) includes:

a step (a2) of deciding one point in a frequency space as the frequency components, based on a result of the frequency analysis; and

a step (a3) of approximating the small region corresponding to the frequency components, to a representative point two-dimensional sinusoidal wave as a two-dimensional sinusoidal wave corresponding to the one point in the frequency space.

26. (Canceled)

27. (Canceled)

28. (Canceled)

29. (Canceled)

30. (Canceled)

31. (Currently amended) The program according to ~~any one of claims 23 to 25~~ claim 23, further comprising

a step (d) of changing, for each of the plural small regions, a method of extracting ridgelines from the finger/palm print image in the small region, based on the judgment result of clarity of the small region, and extracting the ridgelines.

- 8 -